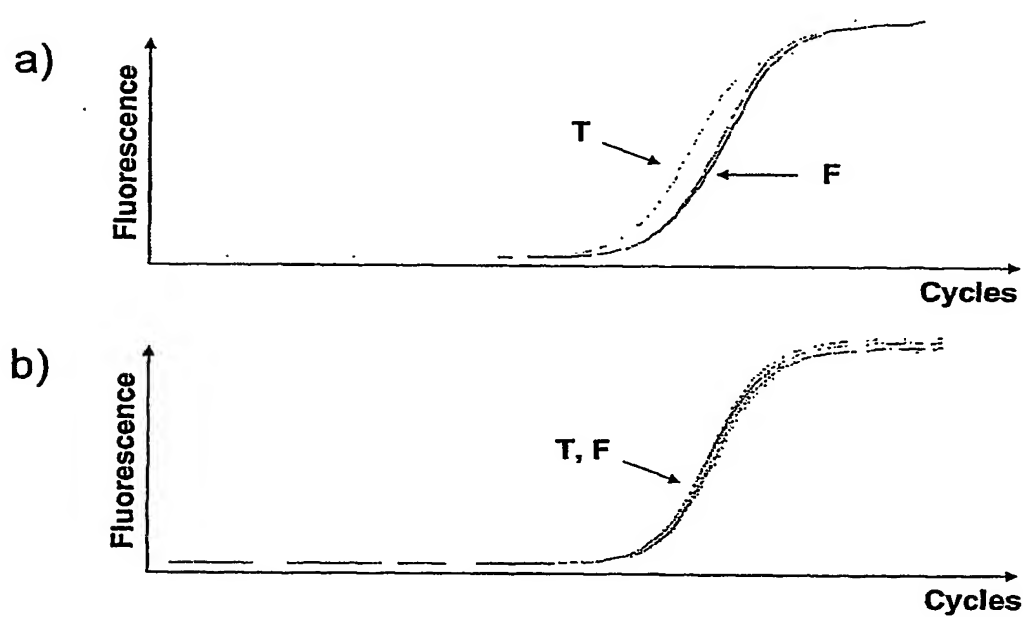
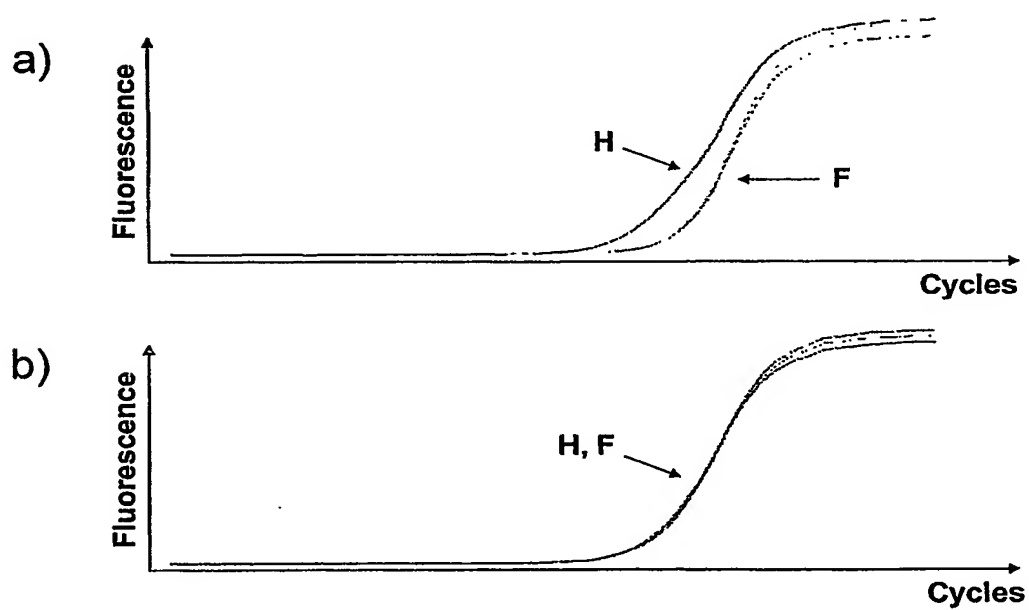


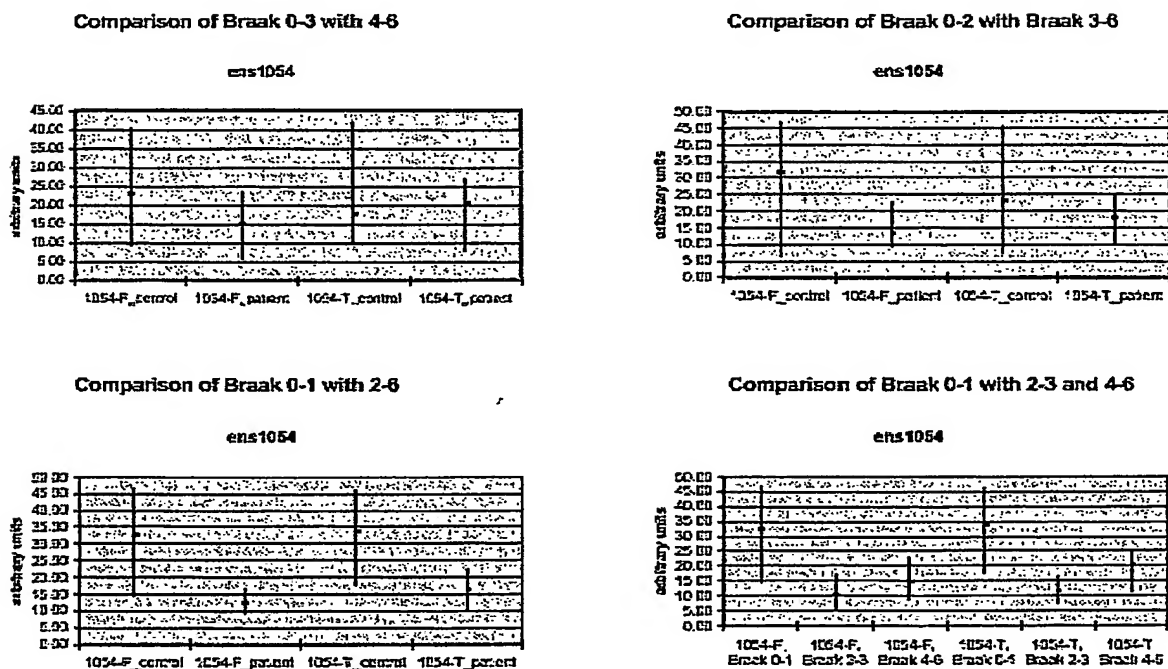
**Figure 1: Verification of differential expression of human DAX-1 by quantitative RT-PCR**



**Figure 2: Verification of differential expression of human DAX-1 by quantitative RT-PCR**



**Figure 3: Analysis of absolute mRNA expression of DAX-1**



## Figure 4: SEQ ID NO. 1: amino acid sequence of human DAX-1 protein

Length: 470 aa

1	MAGENHQWQG	SILYNMLMSA	KQTRAAPEAP	ETRLVDQCWG	CSCGDEPGVG
51	REGLLGGRNV	ALLYRCCFCG	KDHPRQGSIL	YSMLTSAKQT	YAAPKAPEAT
101	LGPCWGCSCG	SDPGVGRAGL	PGGRPVALLY	RCCFCGEDHP	RQGSILYSLL
151	TSSKQTHVAP	AAPEARPGGA	WWDRSYFAQR	PGGKEALPGG	RATALLYRCC
201	FCGEDHPQQG	STLYCVPTST	NQAQAAPEER	PRAPWWDTS	GALRPVALKS
251	PQVVCEAASA	GLLKTLRFVK	YLPCFQVLPL	DQQLVLVRNC	WASLLMLELA
301	QDRLQFETVE	VSEPSMLQKI	LTTRRRETGG	NEPLPVPTLQ	HHLAPPAEAR
351	KVPSASQVQA	IKCFLSKCWS	LNISTKEYAY	LKGTVLFNPD	VPGLQCVKYI
401	QGLQWGTQQI	LSEHTRMTHQ	GPHDRFIELN	STLFLLRFIN	ANVIAELFFR
451	PIIGTVSMDD	MMLEMLCTKI			

## Figure 5: SEQ ID NO. 2: human DAX-1 cDNA nucleotide sequence

Length: 2022 bp

```

1   GAGCTCCCAC GCTGCTGTTT TTCCATTTCC AGCTTTTAAA GAGCACCCGC
51  CCCTTCGAAC CACCGAGGTC ATGGGCGAAC ACACCGGAGC GCAGACCGCG
101 CCCCCCGCA CACACCGCCC GCCTCCGCGC CTTTGCCAG ACCGAGGCGG
151 CCGACGCGCC TGCCTGCGCG CTAGGTATAA ATAGGTCCCA GGAGGCAGCC
201 ACTGGGCAGA ACTGGGCTAC GGGCGCCGCG GGCCATGGCG GGCGAGAACC
251 ACCAGTGGCA GGGCAGCATC CTCTACAACA TGCTTATGAG CGCGAAGCAA
301 ACGCGCGCGG CTCCTGAGGC TCCAGAGACG CGGCTGGTGG ATCAGTGTTG
351 GGGCTGTTCG TGCGGCGATG AGCCCGGGGT GGGCAGAGAG GGGCTGCTGG
401 GCGGGCGGAA CGTGGCGCTC CTGTACCGCT GCTGCTTTTG CGGTAAAGAC
451 CACCCACGGC AGGGCAGCAT CCTCTACAGC ATGCTGACGA GCGCAAAGCA
501 AACGTACGCG GCACCGAAGG CGCCCGAGGC GACGCTGGGT CCGTGCTGGG
551 GCTGTTCGTG CGGCTCTGAT CCCGGGGTGG GCAGAGCGGG GCTTCCGGGT
601 GGGCGGCCCC TGGCACTCCT GTACCGCTGC TGCTTTTGTG GTGAAGACCA
651 CCCGCGGCAG GGCAGCATCC TCTACAGCTT GCTCACTAGC TCAAAGCAAA
701 CGCACGTGGC TCCGGCAGCG CCCGAGGCAC GGCCAGGGGG CGCGTGGTGG
751 GACCGCTCCT ACTTCGCGCA GAGGCCAGGG GGTAAAGAGG CGCTACCAGG
801 CGGGCGGGCC ACGGCGCTTC TGTACCGCTG CTGCTTTTGC GGTGAAGACC
851 ACCCGCAGCA GGGCAGCACC CTCTACTGCG TGCCACGCA CACAAATCAA
901 GCGCAGGCGG CTCCGGAGGA GCGGCGAGG GCCCCTGGT GGGACACCTC
951 CTCTGGTGGC CTGCGGCGCG TGGCGCTCAA GAGTCCACAG GTGGTCTGCG
1001 AGCGAGCCTC AGCGGGCCTG TTGAAGACGC TCGCTTCGT CAAGTACTTG
1051 CCCTGCTTCC AGGTGCTGCC CCTGGACCAG CAGCTGGTGC TGGTGCACAA
1101 CTGCTGGGCG TCCCTGCTCA TGCTTGAGCT GGCCAGGAC CGCTTGCACT
1151 TCGAGACTGT GGAAGTCTCG GAGCCCAGCA TGCTGCAGAA GATCCTCACC
1201 ACCAGGCGGC GGGAGACCGG GGGCAACGAG CCACTGCCCC TGCCACGCT
1251 GCAGCACCAT TTGGCACCGC CGGCGGAGGC CAGGAAGGTG CCCTCCGCCT
1301 CCCAGGTCCA AGCCATCAAG TGCTTTCTTT CCAAATGCTG GAGTCTGAAC
1351 ATCAGTACCA AGGAGTACGC CTACCTCAAG GGGACCGTGC TCTTTAACCC
1401 GGACGTGCCG GGCCTGCAGT GCGTGAAGTA CATTCAGGGA CTCCAGTGGG
1451 GAACTCAGCA AATACTCAGT GAACACACCA GGATGACGCA CCAAGGGCCC
1501 CATGACAGAT TCATCGAACT TAATAGTACC CTTTTCCTGC TGAGATTCAT
1551 CAATGCCAAT GTCATTGCTG AACTGTTCTT CAGGCCCATC ATCGGCACAG
1601 TCAGCATGGA TGATATGATG CTGGAAATGC TCTGTACAAA GATATAAAGT
1651 CATGTGGGCC ACACAAGTGC AGTAGTGCAG TTCACCATGA GGGAAGAATA
1701 AAGAGCTGTG GGCAAAAGAG TGTAATAATAT TTTAAATAA ACTTTCTTAA
1751 TATTTTTTACA TGCAGAGTAT TTTGATCTTC AATTAAAGAA ATAATTTTAT
1801 TCCCAGCACA GTCACAAATT TCTCTGTTCC ATAGTTAAAG AAGACATTTG
1851 CCAACAGGTA GCATAGCTCT GTACATCTTT TAAAAAATA ATCGCAGGGT
1901 ACTAGTATAA TAAGCTATTT TCACAAGCGC AGCAATTTCA TGGAACCTGC
1951 TCAATCAAAA TTTGTACATA TTGTTATAAT AAATTTTAA GTCTTAACCTA
2001 TTAACCTGAT TGAAAAAGC TT

```

## Figure 6: SEQ ID NO. 3: nucleotide sequence of human DAX-1 coding sequence

Length: 1413 bp

```

1  ATGGCGGGCG AGAACCACCA GTGGCAGGGC AGCATCCTCT ACAACATGCT
51  TATGAGCGCG AAGCAAACGC GCGCGGCTCC TGAGGCTCCA GAGACGCGGC
101 TGGTGGATCA GTGTTGGGGC TGTCGTGCG GCGATGAGCC CGGGGTGGGC
151 AGAGAGGGGC TGCTGGGCGG GCGGAACGTG GCGCTCCTGT ACCGCTGCTG
201 CTTTTGCGGT AAAGACCACC CACGGCAGGG CAGCATCCTC TACAGCATGC
251 TGACGAGCGC AAAGCAAACG TACGCGGCAC CGAAGGCGCC CGAGGCGACG
301 CTGGGTCCGT GCTGGGGCTG TTCGTGCGGC TCTGATCCCG GGGTGGGCAG
351 AGCGGGGCTT CCGGGTGGGC GGCCCGTGGC ACTCCTGTAC CGCTGCTGCT
401 TTTGTGGTGA AGACCACCCG CGGCAGGGCA GCATCCTCTA CAGCTTGCTC
451 ACTAGCTCAA AGCAAACGCA CGTGGCTCCG GCAGCGCCCG AGGCACGGCC
501 AGGGGGCGCG TGGTGGGACC GCTCCTACTT CGCGCAGAGG CCAGGGGGTA
551 AAGAGGCGCT ACCAGGCGGG CGGGCCACGG CGCTTCTGTA CCGCTGCTGC
601 TTTTGCGGTG AAGACCACCC GCAGCAGGGC AGCACCTCT ACTGCGTGCC
651 CACGAGCACA AATCAAGCGC AGGCGGCTCC GGAGGAGCGG CCGAGGGCCC
701 CCTGGTGGGA CACCTCCTCT GGTGCGCTGC GGCCGGTGGC GCTCAAGAGT
751 CCACAGGTGG TCTGCGAGGC AGCCTCAGCG GGCCTGTTGA AGACGCTGCG
801 CTTGTCGAAG TACTTGCCCT GCTTCCAGGT GCTGCCCTG GACCAGCAGC
851 TGGTGCTGGT GCGCAACTGC TGGGCGTCCC TGCTCATGCT TGAGCTGGCC
901 CAGGACCGCT TGCAGTTCGA GACTGTGGAA GTCTCGGAGC CCAGCATGCT
951 GCAGAAGATC CTCACCACCA GGCGGCGGGA GACCGGGGGC AACGAGCCAC
1001 TGCCCGTGCC CACGCTGCAG CACCATTGTT CACCGCCGGC GGAGGCCAGG
1051 AAGGTGCCCT CCGCCTCCCA GGTCCAAGCC ATCAAGTGCT TTCTTTCCAA
1101 ATGCTGGAGT CTGAACATCA GTACCAAGGA GTACGCCTAC CTCAAGGGGA
1151 CCGTGCTCTT TAACCCGGAC GTGCCGGGCC TGCAGTGCGT GAAGTACATT
1201 CAGGGACTCC AGTGGGGAAC TCAGCAAATA CTCAGTGAAC ACACCAGGAT
1251 GACGCACCAA GGGCCCCATG ACAGATTCAT CGAACTTAAT AGTACCCTTT
1301 TCCTGCTGAG ATTCATCAAT GCCAATGTCA TTGCTGAACT GTTCTTCAGG
1351 CCCATCATCG GCACAGTCAG CATGGATGAT ATGATGCTGG AAATGCTCTG
1401 TACAAAGATA TAA

```

**Figure 7: Alignment of DAX-1 primers with human DAX-1 cDNA, SEQ ID NO. 2**

```
      1 TACCAAGGAGTACGCCTACCTCA 23
      ||||||||||||||||||||
1356 TACCAAGGAGTACGCCTACCTCA 1378
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```
      20 TGCTCTTTAACCCGGACGTG 1
      ||||||||||||||||||
1388 TGCTCTTTAACCCGGACGTG 1407
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Figure 8 :

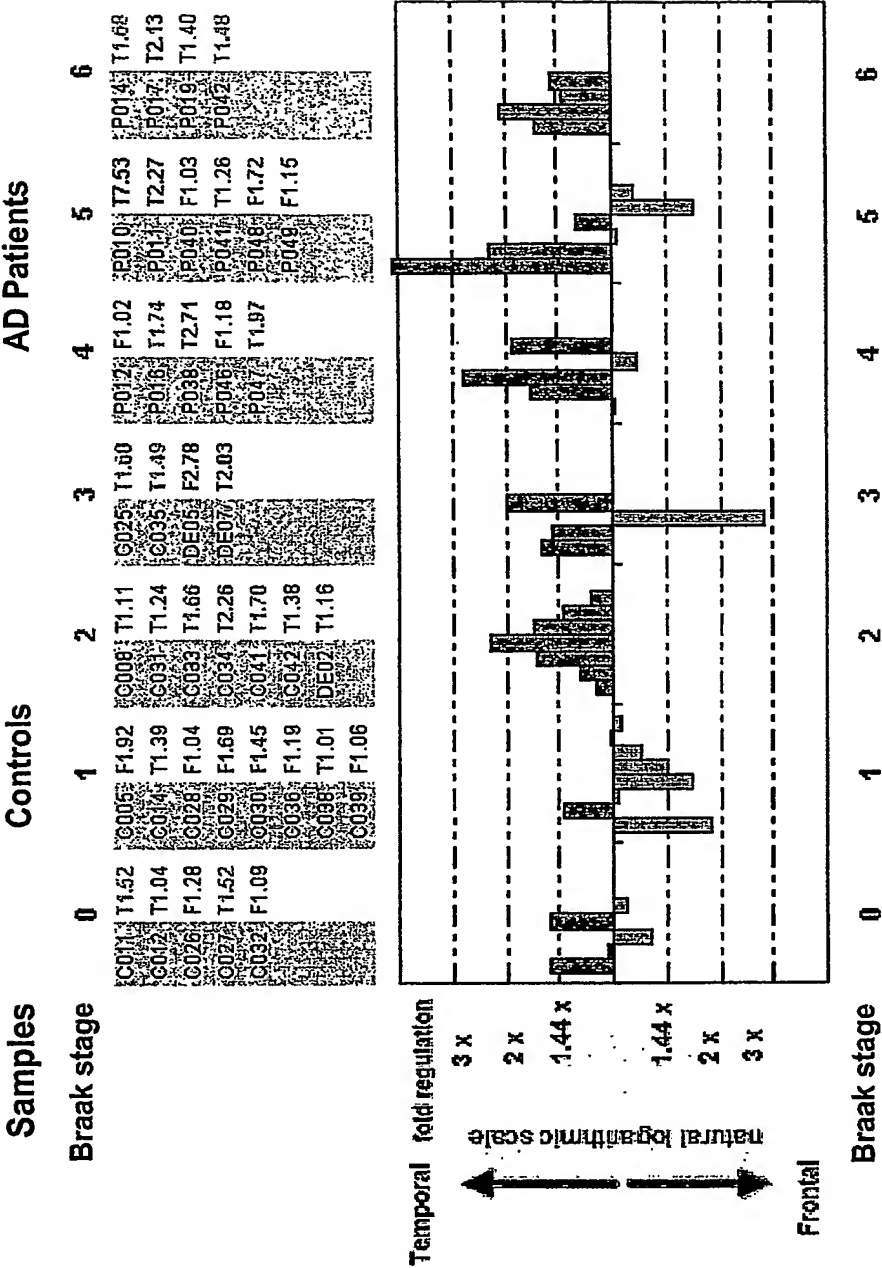
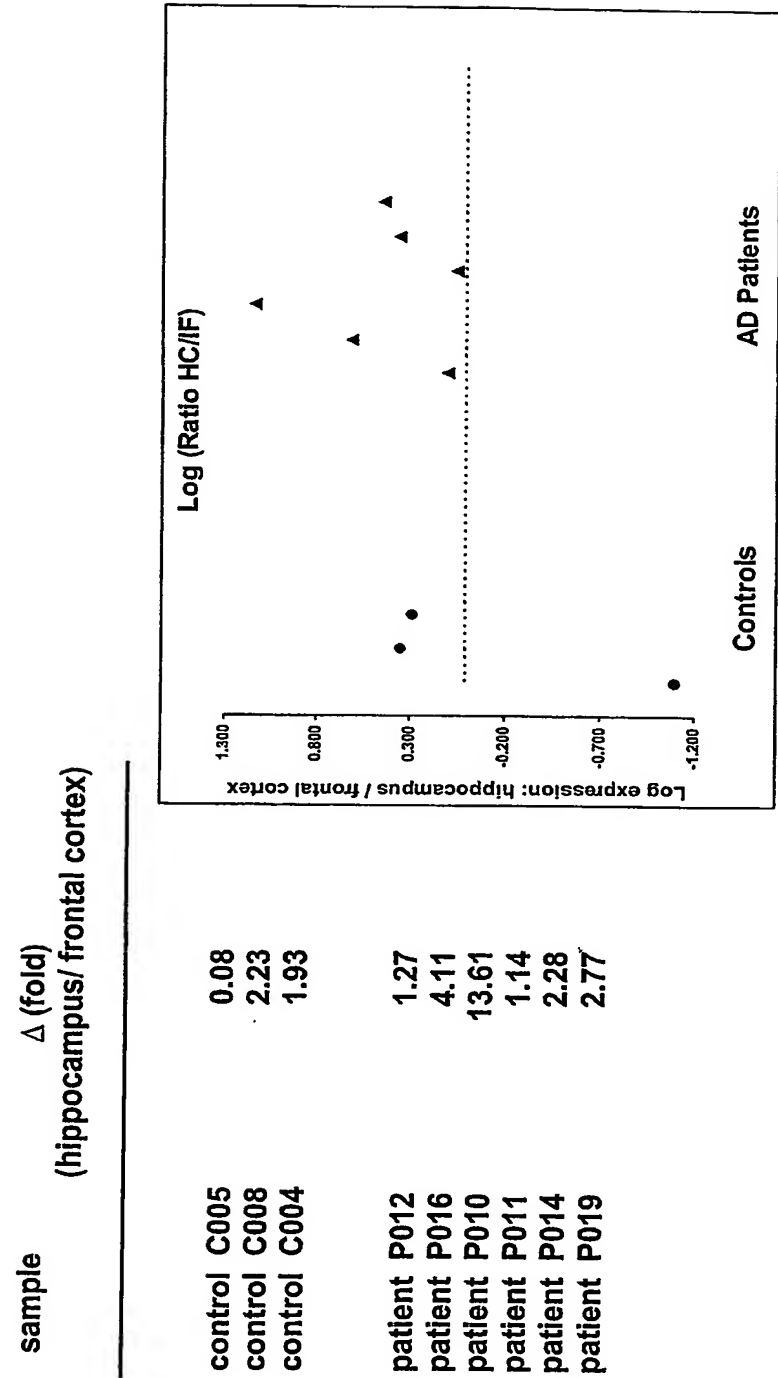


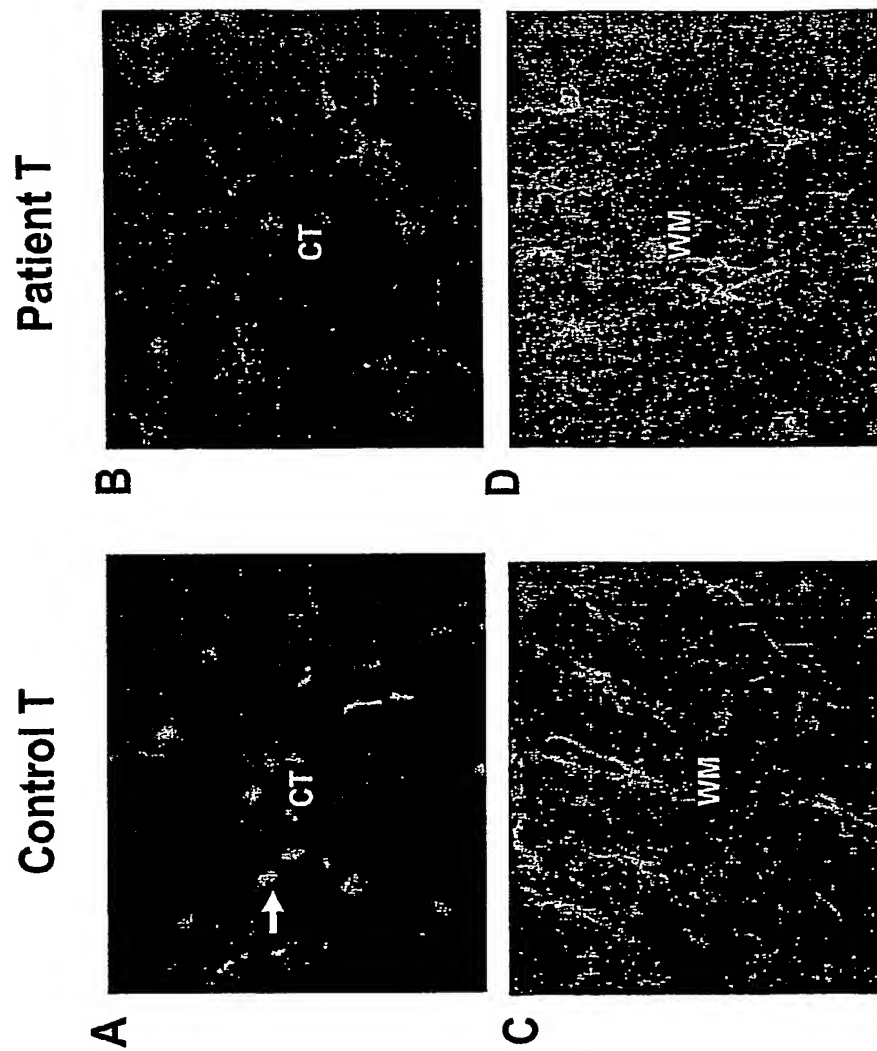


Figure 9 :

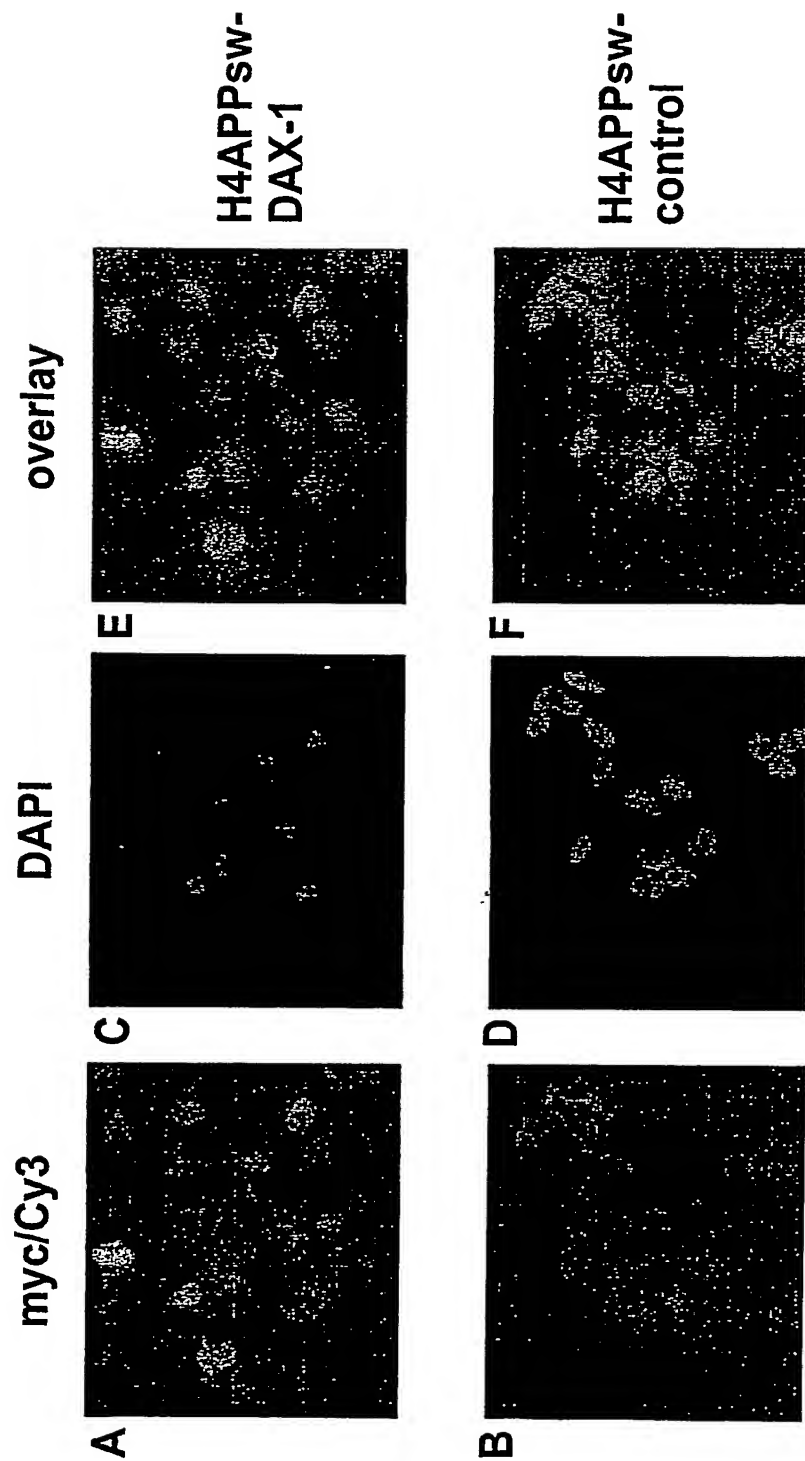




**Figure 11: Images of human brain sections labeled with anti-DAX-1 antiserum and with DAPI**



**Figure 12: Immunofluorescence analysis of DAX-1 protein in neuroglioma cells**



**Figure 13: Effect of trophic factor deprivation on DAX-1 over-expressing cells**

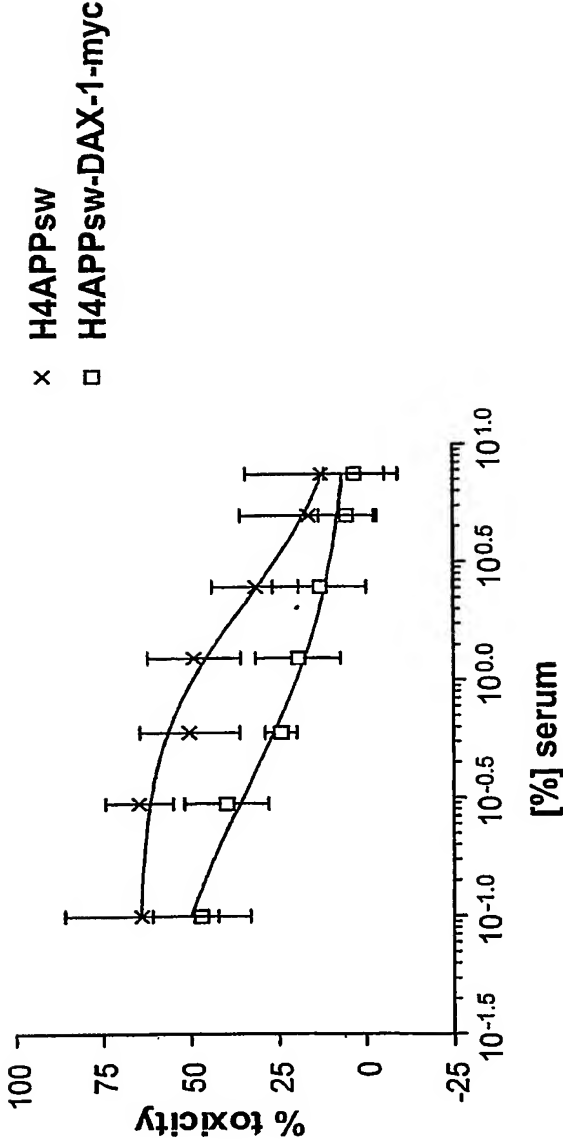
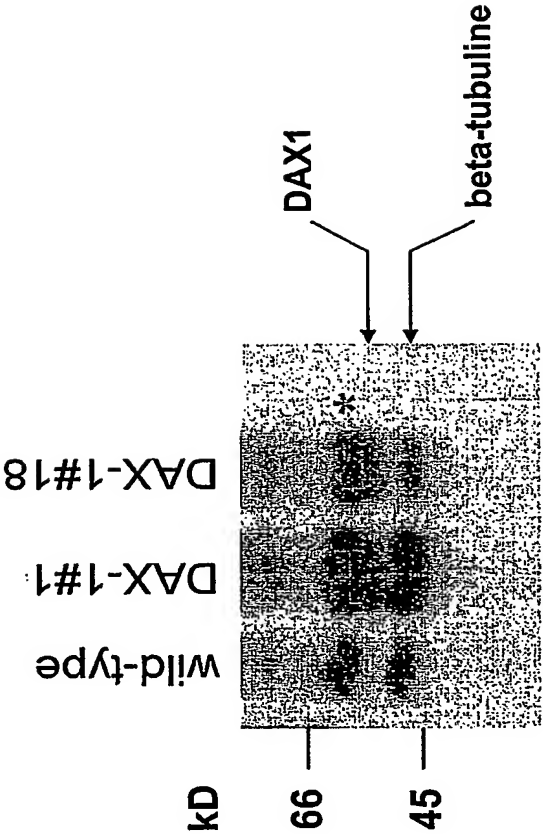
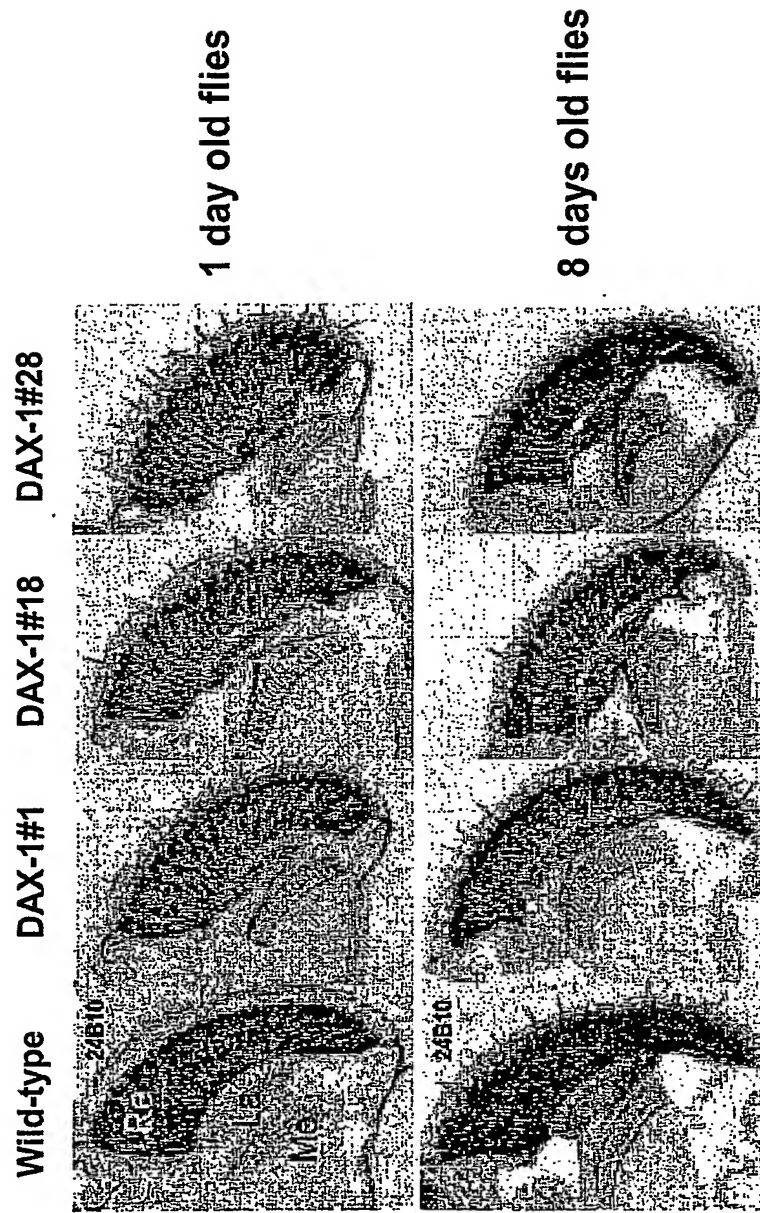


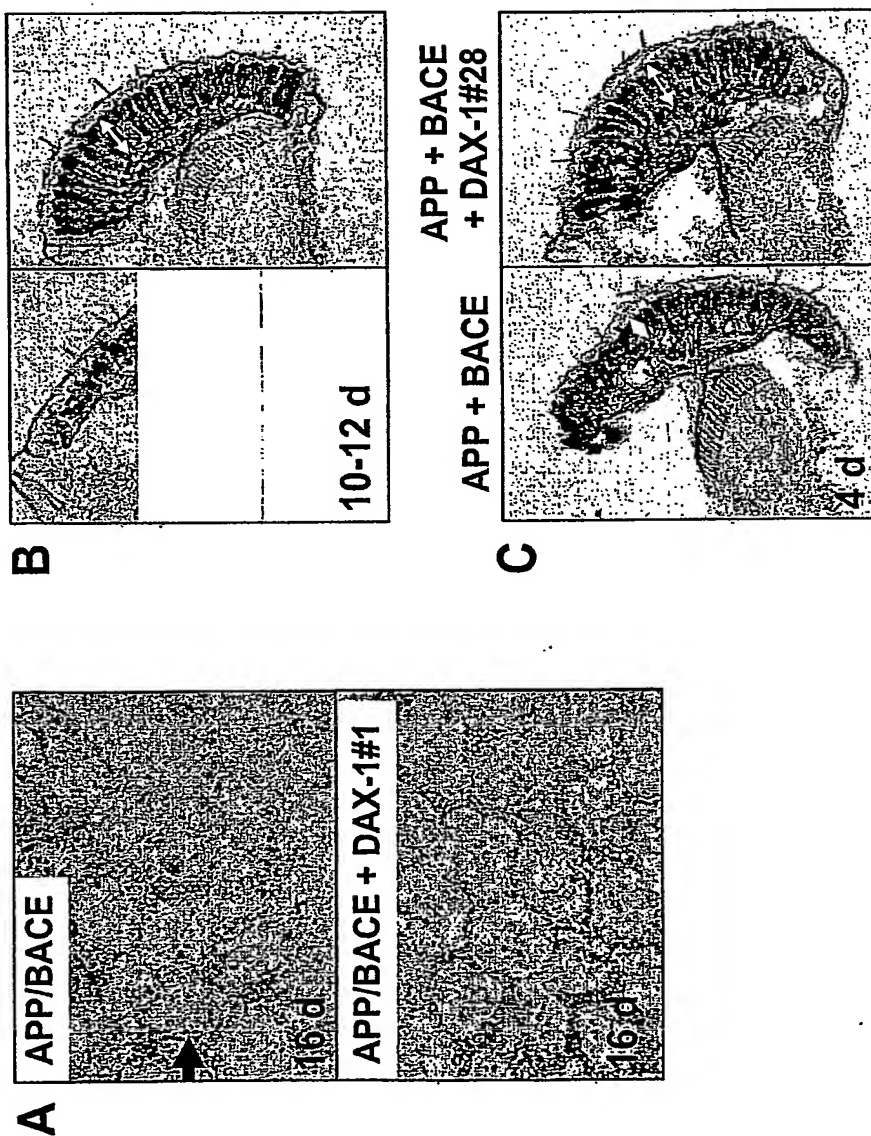
Figure 14: DAX-1 Protein expression in transgenic flies



**Figure 15: DAX-1 Protein expression in the retina  
of adult flies**

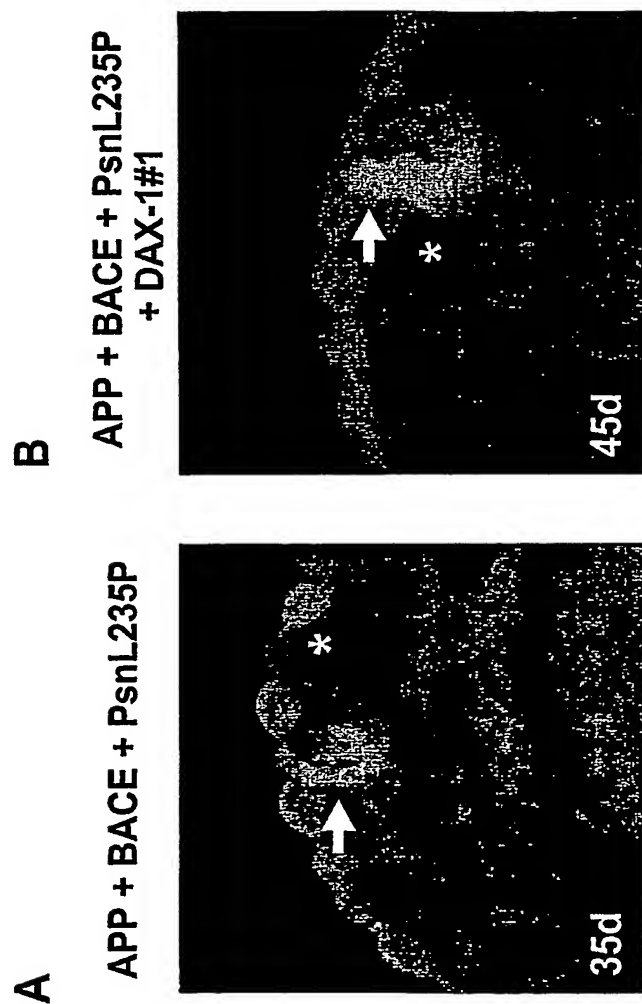


**Figure 16: DAX-1 rescues photoreceptor cell degeneration induced by APP/BACE**





**Figure 17: Thioflavin S positive amyloid plaques  
in DAX-1 expressing flies**



**Figure 18: DAX-1 rescues photoreceptor cell degeneration induced by TAU**

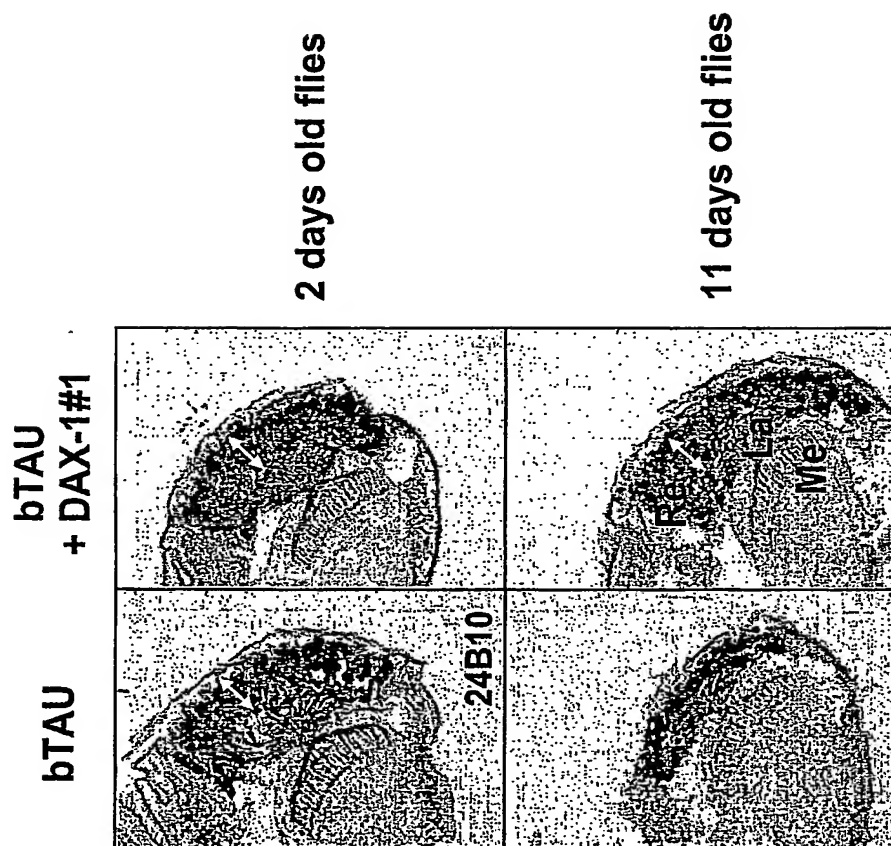


Figure 19: Generation of DAX-1 transgenic mice

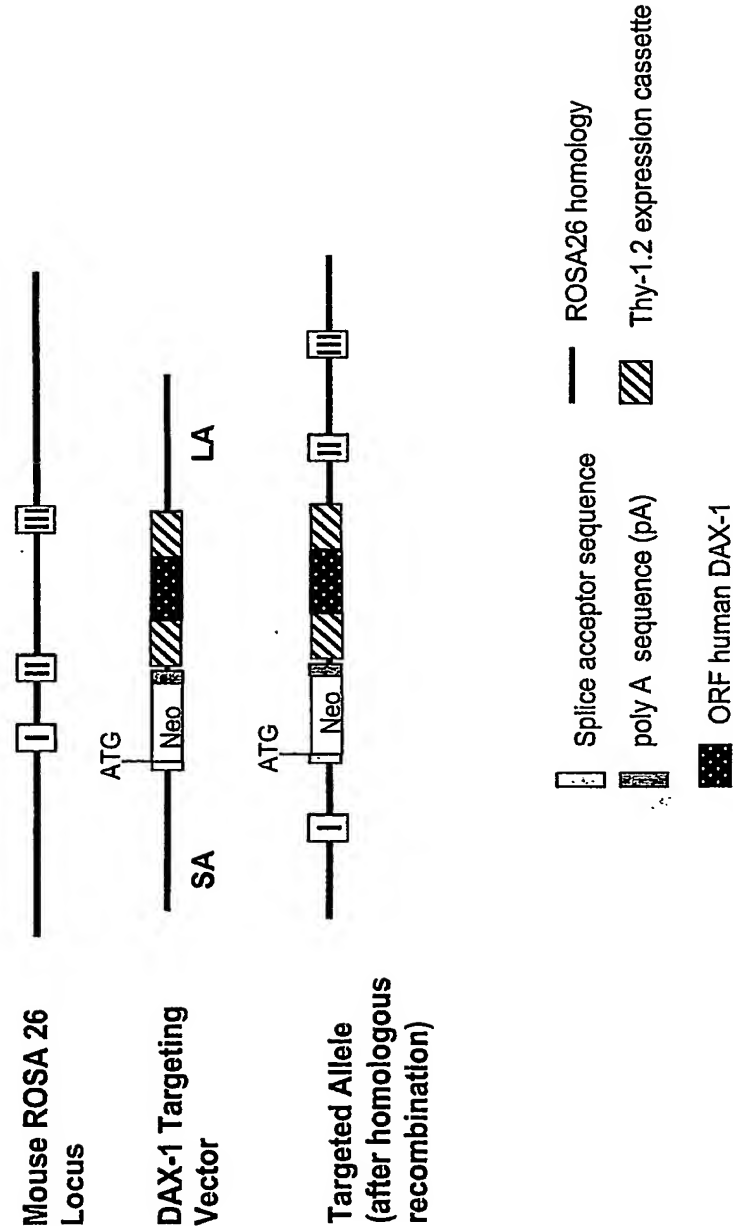
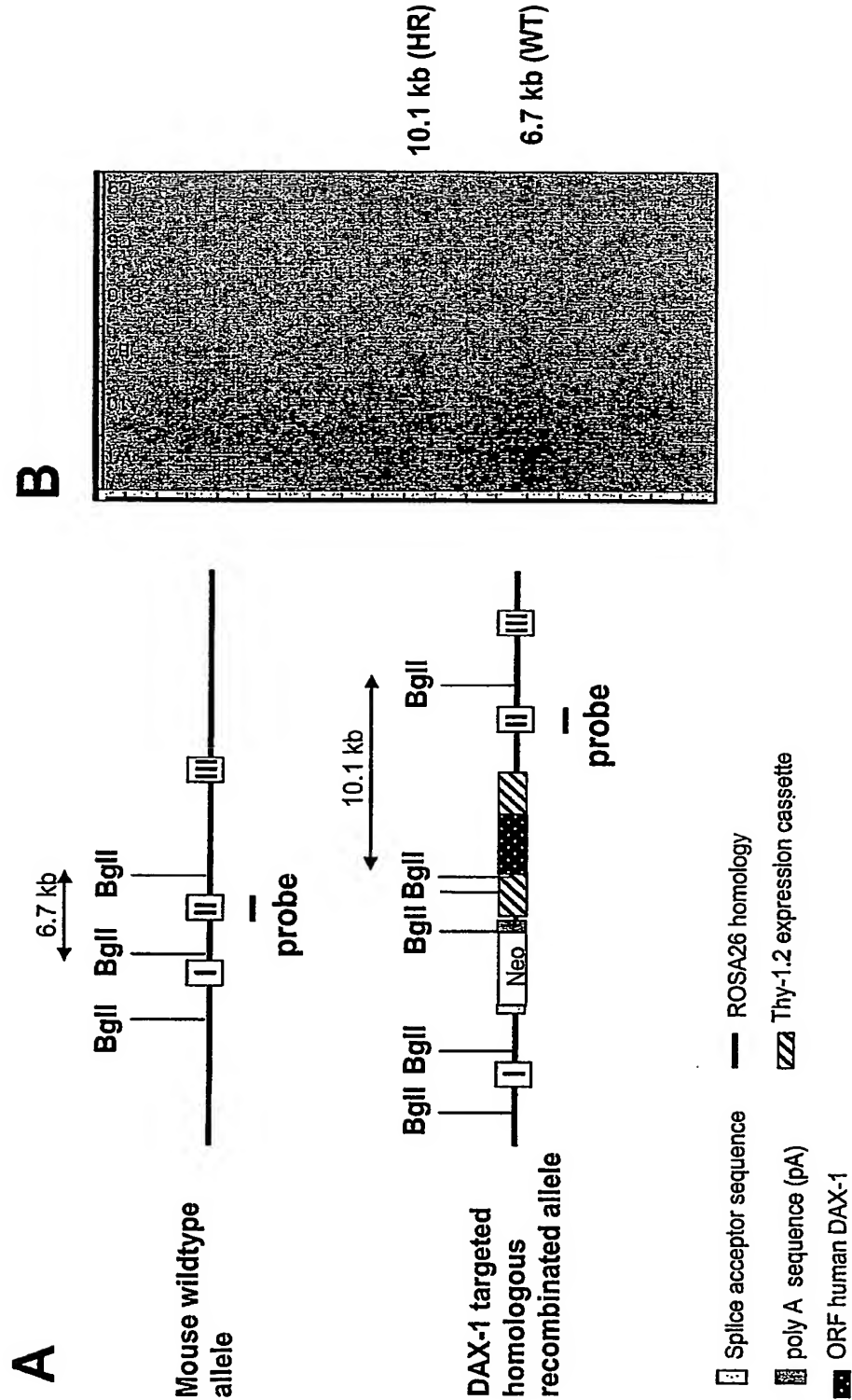


Figure 20: DAX-1 targeted ES cell clones



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